

Become a Professional Drone Pilot



The Code of Federal Regulations



Intro to dealing with the FAA

In the FAA's official study guide for the part 107 test, the first section on *Applicable Regulations* is a single sentence.

"Be familiar with 14 CFR part 107 and all parts referenced in part 107, as well as AC 107-2."

In true governmental fashion, the provided link to 14 CFR part 107 has been broken since at least early 2017. So here's a working link. Feel free to check it out. But we'll cover what's inside throughout this section.

By the way, information from 14 CFR part 107 makes up nearly a fourth of the test. And the link is broken. Welcome to your new life with the FAA.

Getting Familiar with 14 CFR part 107

The **CFR** (Code of Federal Regulations) is a collection of laws governing things like banking, domestic security, highways, and agriculture. Title 14 pertains to "aeronautics and space." That's us!

Part 107 of title 14 is specific to **small unmanned aircraft systems**—more often abbreviated as **sUAS**—which is the FAA's preferred term for drones. It contains definitions and statements that make up the rulebook for lawful droning.

As you can expect with the FAA, there's a ton of excessive language. You're of course welcome to read through it if you'd like. But here are the important takeaways for you to commit to memory:

You are the PIC, and you are accountable.

PIC refers to the Pilot in Command. This is you. It's also the first of many acronyms the FAA wants you to know.

You can feel confident knowing that if a question arises on the test that asks about **responsibility** in any capacity, PIC will likely be the answer. This is made very clear in CFR 14 Part 107.

"Remote PIC must be designated and is directly responsible for the aircraft, ensuring it does not pose risks to others, and ensuring that it complies with all regulations."

"PICs must assess operating environment and risks before flying."

Tragically, some of the most beautiful aerial shots are found in national parks, major cities, or other airspace that prohibits drone flight. The FAA wants you to know that, as the PIC, you are responsible for saying no to these opportunities. On the test, they're often willing to give you a free question just so you will acknowledge their rules.

There are limits on where you can fly.

We'll get into the specifics in our upcoming section on Airspace, but for now, here are some key takeaways from 14 CFR part 107..

- **Keep your drone within sight.**You must always keep your drone within "visual line of sight."
- Don't fly 400 ft above (a) ground or (b) nearby buildings. The maximum height you can fly above ground level (AGL) is 400 feet. If you're flying around or inspecting a building/structure, you can fly 400 feet above than that structure as long as you're within a 400-foot radius of it.

· Stay 500 ft below the clouds.

You have to fly at least 500 feet below clouds and at least 2,000 feet away horizontally.

Stay 2,000 ft away from towers.

You must operate at least 2,000 feet away from towers to avoid hitting guy wires.

You must yield to all other air traffic.

This one is simple. You cannot fly a drone in any way that interferes with operations or traffic patterns at any airport, heliport, or sea base.

You can't fly at night.

Once the sun goes down, you can't go up. There are often questions on the test about how the setting sun can affect your flight.

30 minutes before or after sunset is "civil twilight."

You can only fly for the 30 minutes before sunrise or the 30 minutes after sunset. (This window is known as "civil twilight.")

· You need anti-collision lights during civil twilight.

If you fly during Civil Twilight, you need anti-collision lighting visible for three statute miles. • In Alaska, check the Air Almanac.

In Alaska, where the sun behaves quite differently throughout the year, "civil twilight" is defined in the Air Almanac.

You must register your drone.

• Drones weighing .55 lbs to 55 lbs must be registered.
55 lbs is heaviest legal drone you can operate/register (must be less than, not equal to, 55 lbs).

0.55 lbs is the lightest drone that must be registered.

You have a maintenance schedule. *wink*
 You're supposed to have a "maintenance schedule" for your drone, even though most drones can't be user-repaired and most drone repair shops don't provide a schedule.

- You must let the FAA inspect your drone if they want to.
 You need to allow inspection of your aircraft.
- You must be 13 to register a drone.
 13 is the youngest a person can be to legally register a drone.

You must be certified every 24 months.

As you know, you need a certification to pilot professionally. Any specific questions on the test concerning your certification or your responsibilities to the FAA will reference:

Your certification is good for 24 months.

- You must wait 14 calendar days to reapply for the test if you fail.
- If you move, you must notify the FAA within 30 days.
- If you're convicted for narcotics, you must wait one year before reapplying for certification.
- If you want to request a waiver from the FAA, you must factor in a lead time of 90 days.

You are in charge of your crew.

As the PIC, you are the person in charge. But there are certain responsibilities you can delegate to a somebody else.

Firstly, you can work with a **Visual Observer (VO)**, who can relieve you of your obligation to maintain visual line of sight. Instead, *they* must never lose sight of the drone.

You can also fly with a **co-pilot**. They don't have to have a remote pilot certificate to fly with you, but you do need to stay close enough to take the controls over if things go wrong.

The FAA only wants to know about serious crashes.

Another big topic is the PIC's specific responsibilities in case of emergency.

In the case of a drone crash, you must file an accident report with the FAA within 10 days only if.

You cause over \$500 of damage.

The repair cost of the damage your drone caused is greater than or equal to 500. This does not include the cost of repairing your drone.

· Somebody gets seriously injured.

Somebody sustains a "serious injury," or level 3 AIS injury severity score. There's actually an equation for determining an injury severity score, but a 3 is for injuries like an open humerus fracture.

You cannot drink and drone.

Questions about drinking show up frequently. If they aren't a question of responsibility (AKA can you drink and drone), then they'll be about these numbers.

\cdot 0.04 is the legal limit.

0.04 is the maximum blood alcohol level for the PIC.

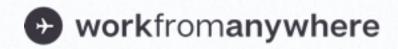
· 8 hours must pass after your last drink.

8 hours must pass since you have had alcohol.

Restrictions on drone flight in 14 CFR Part 107

- · You can only fly one drone at a time.
- The fastest you can legally fly a drone is 100 MPH/87 Knots.

- Drones can't be piloted from other aircrafts and can only be piloted from moving vehicles in sparsely populated areas.
- Small unmanned aircrafts cannot carry hazardous material.



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